

Fig. 1

Separate Primary DNS and EDNS

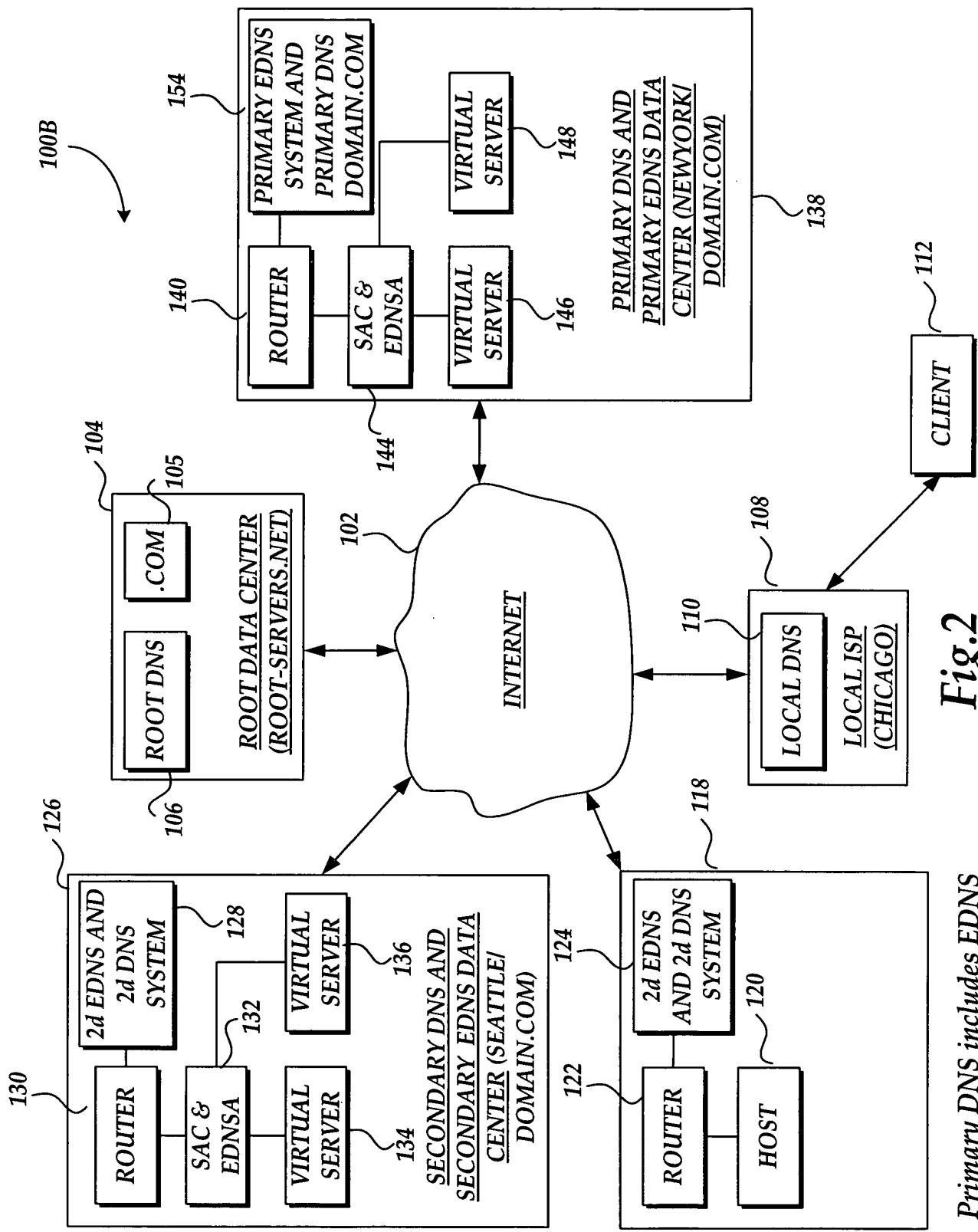
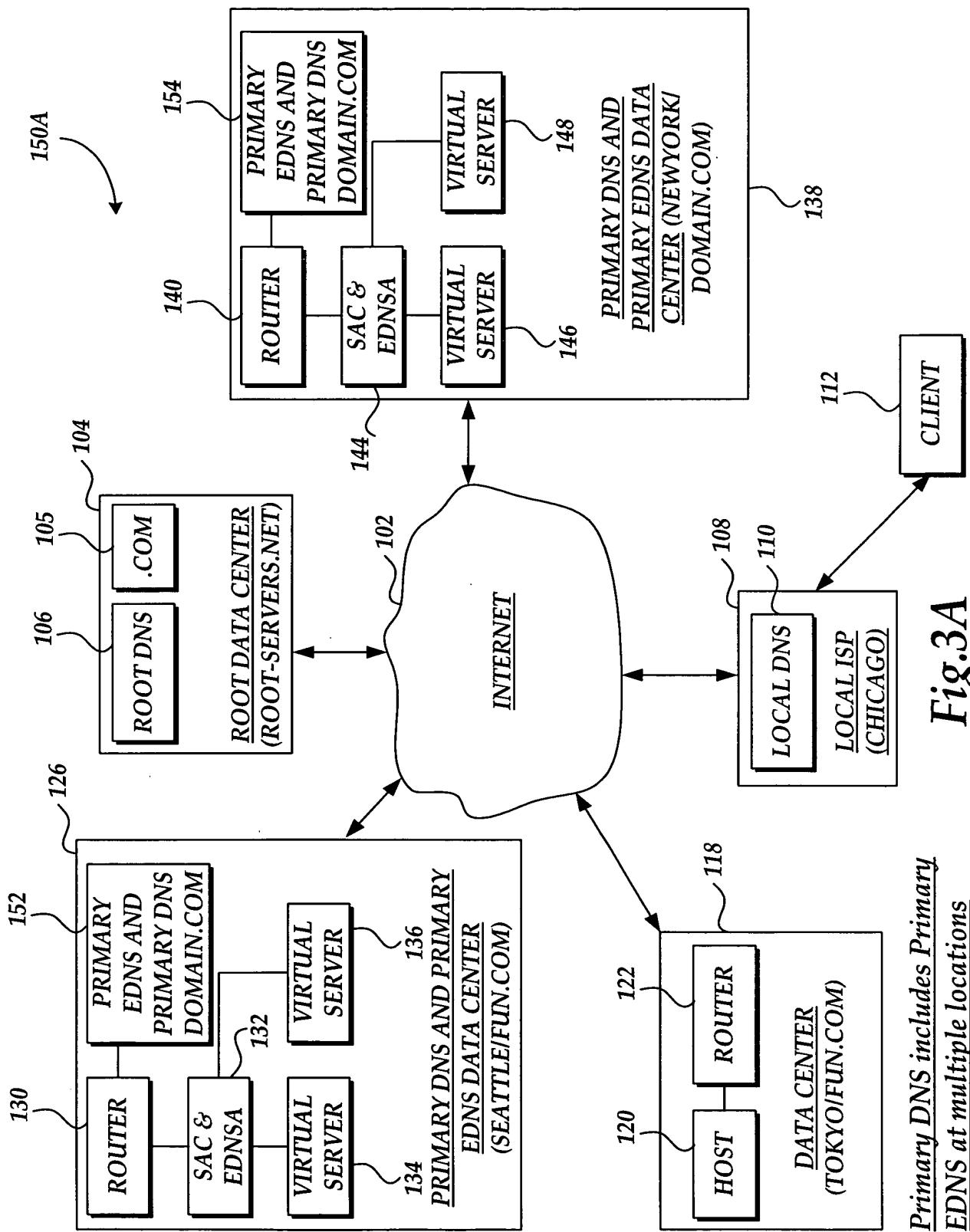


Fig.2

Primary DNS includes EDNS



Primary DNS includes Primary EDNS at multiple locations

Fig.3A

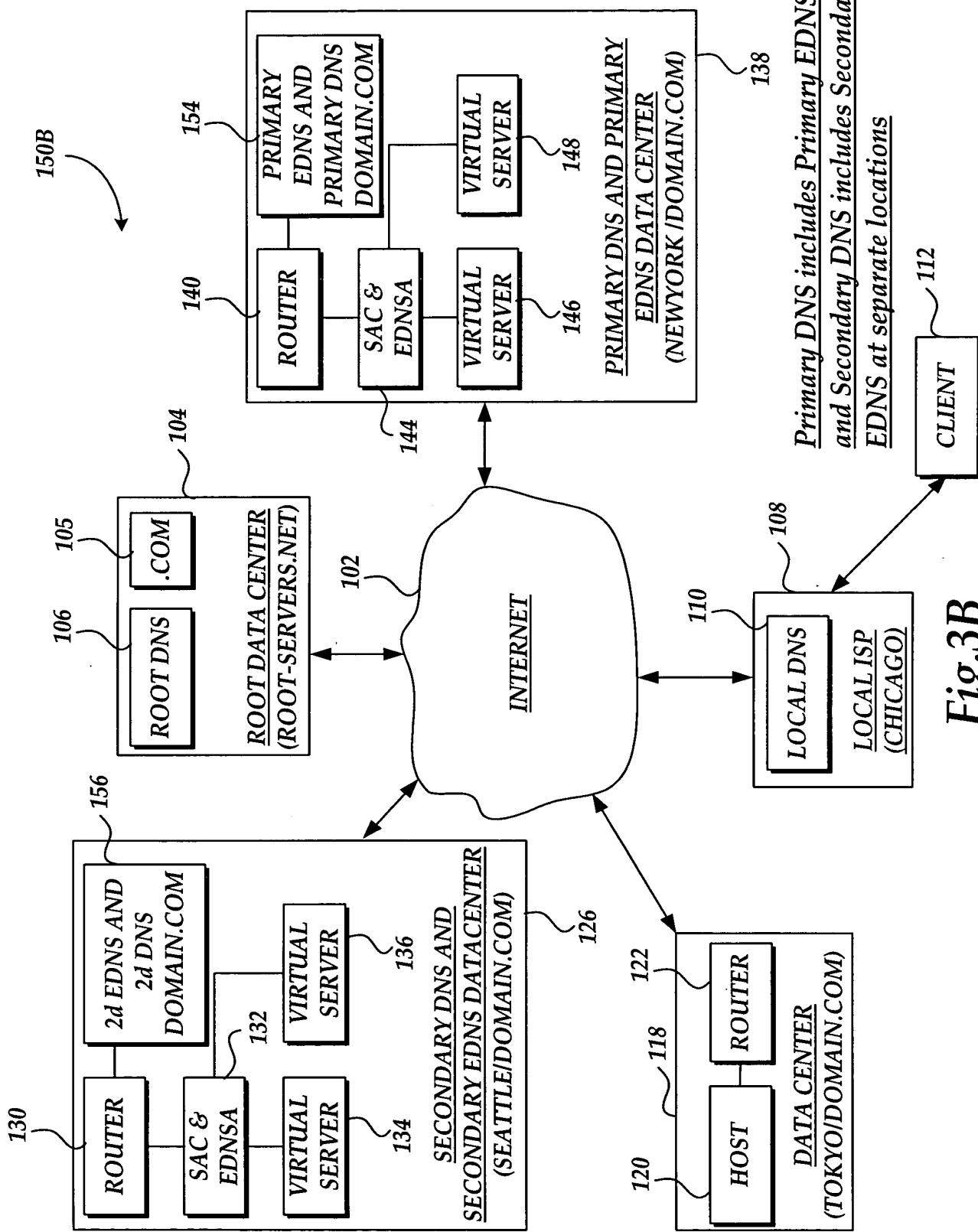


Fig. 3B

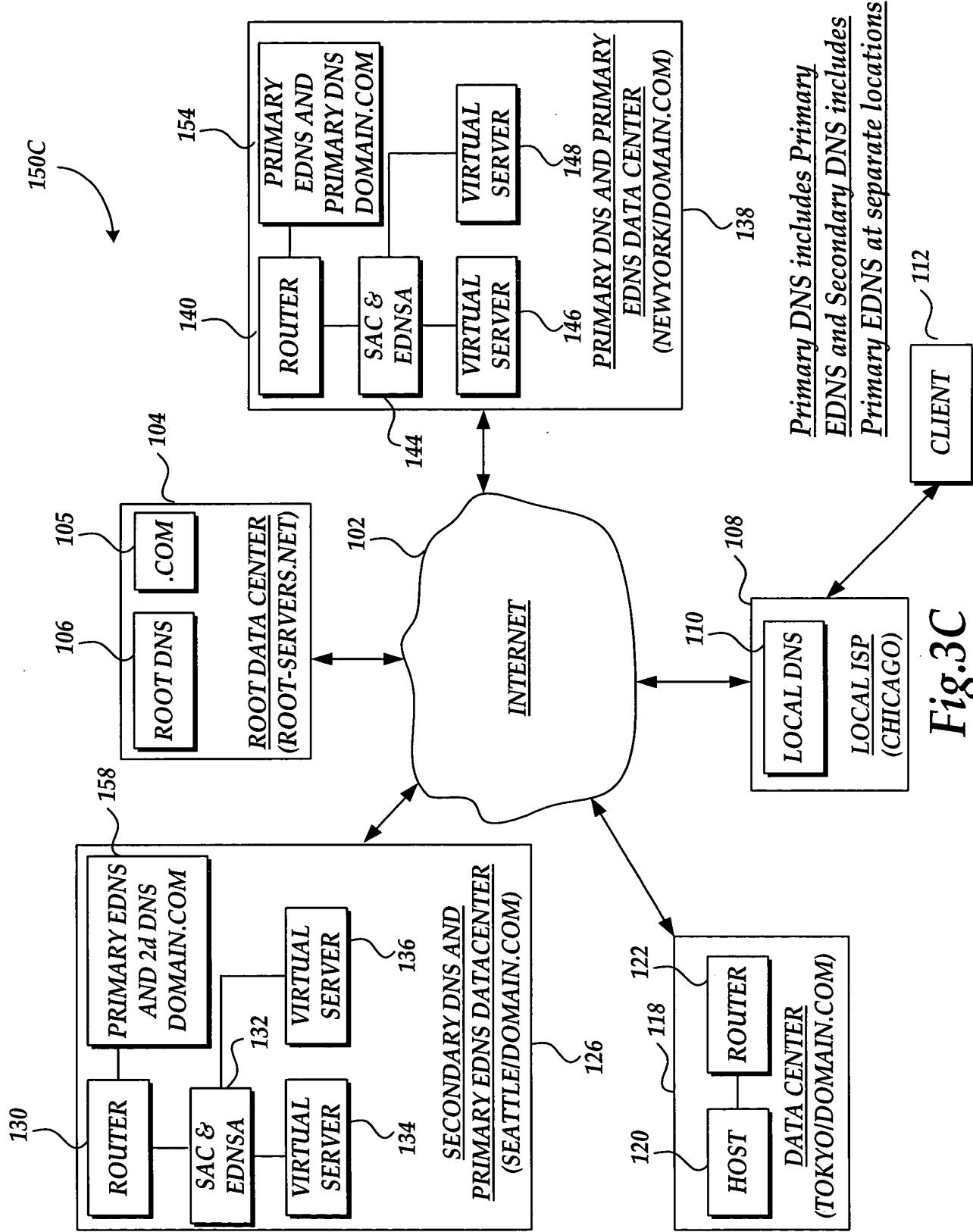


Fig.3C

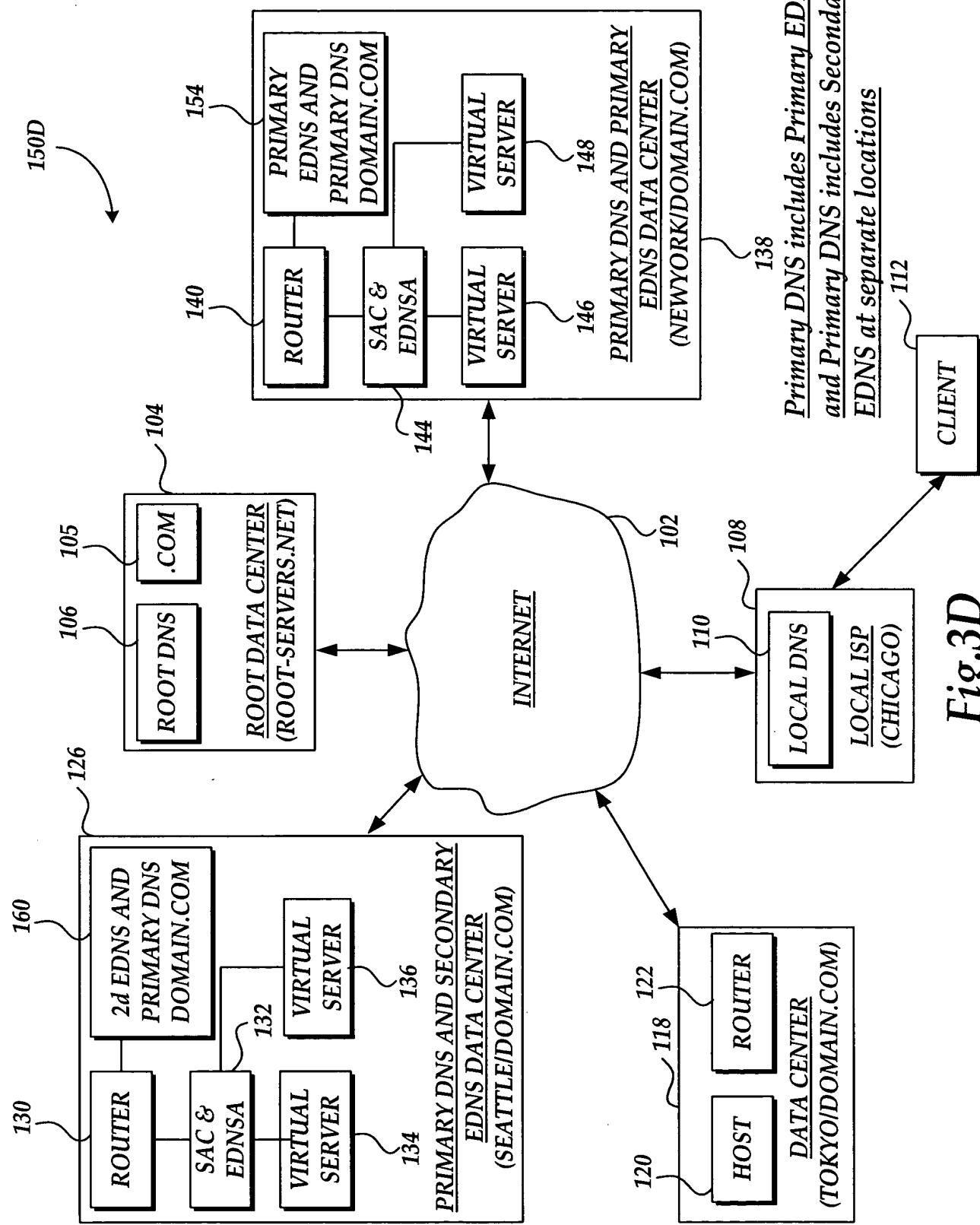


Fig.3D

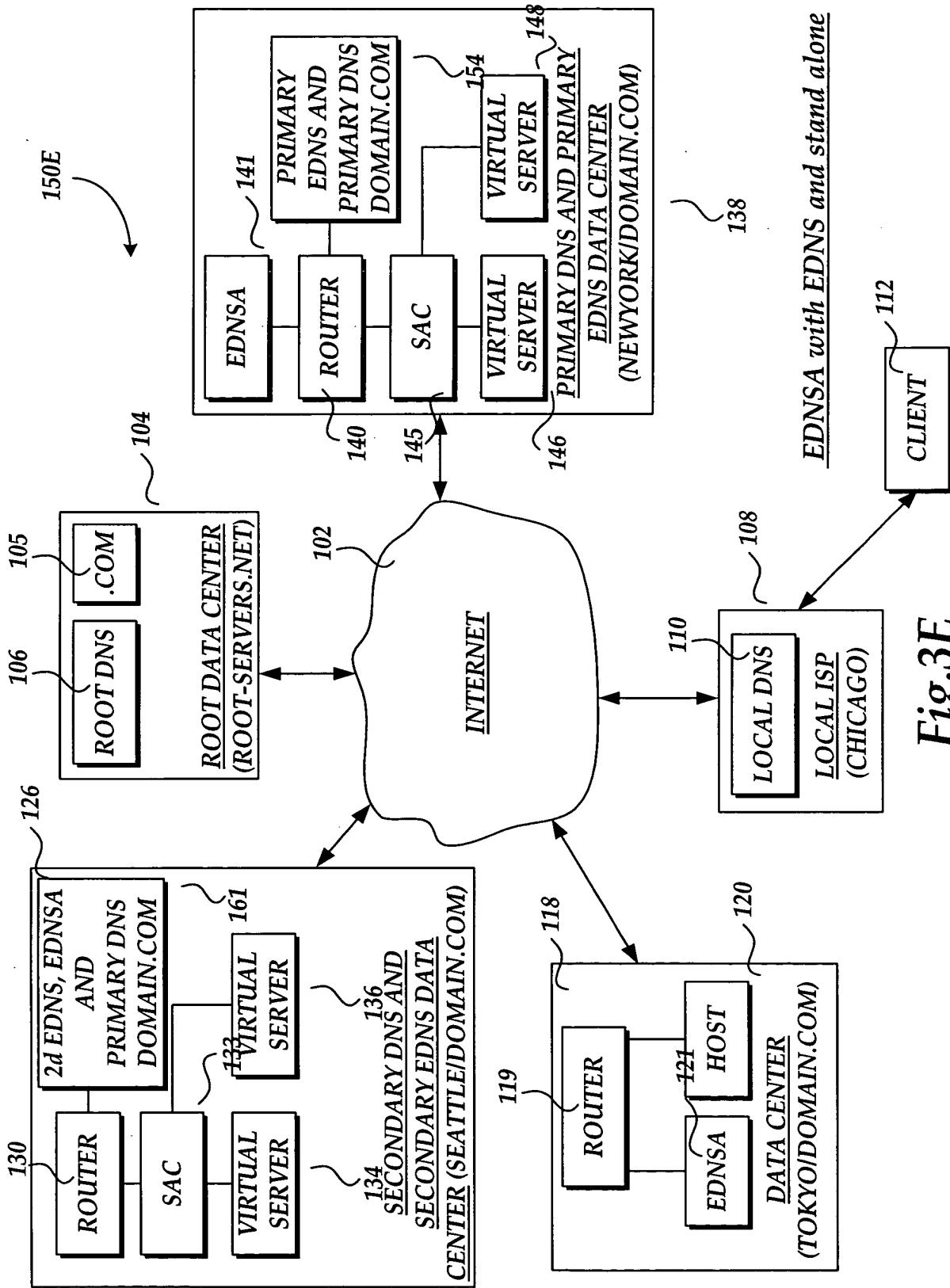


Fig.3E

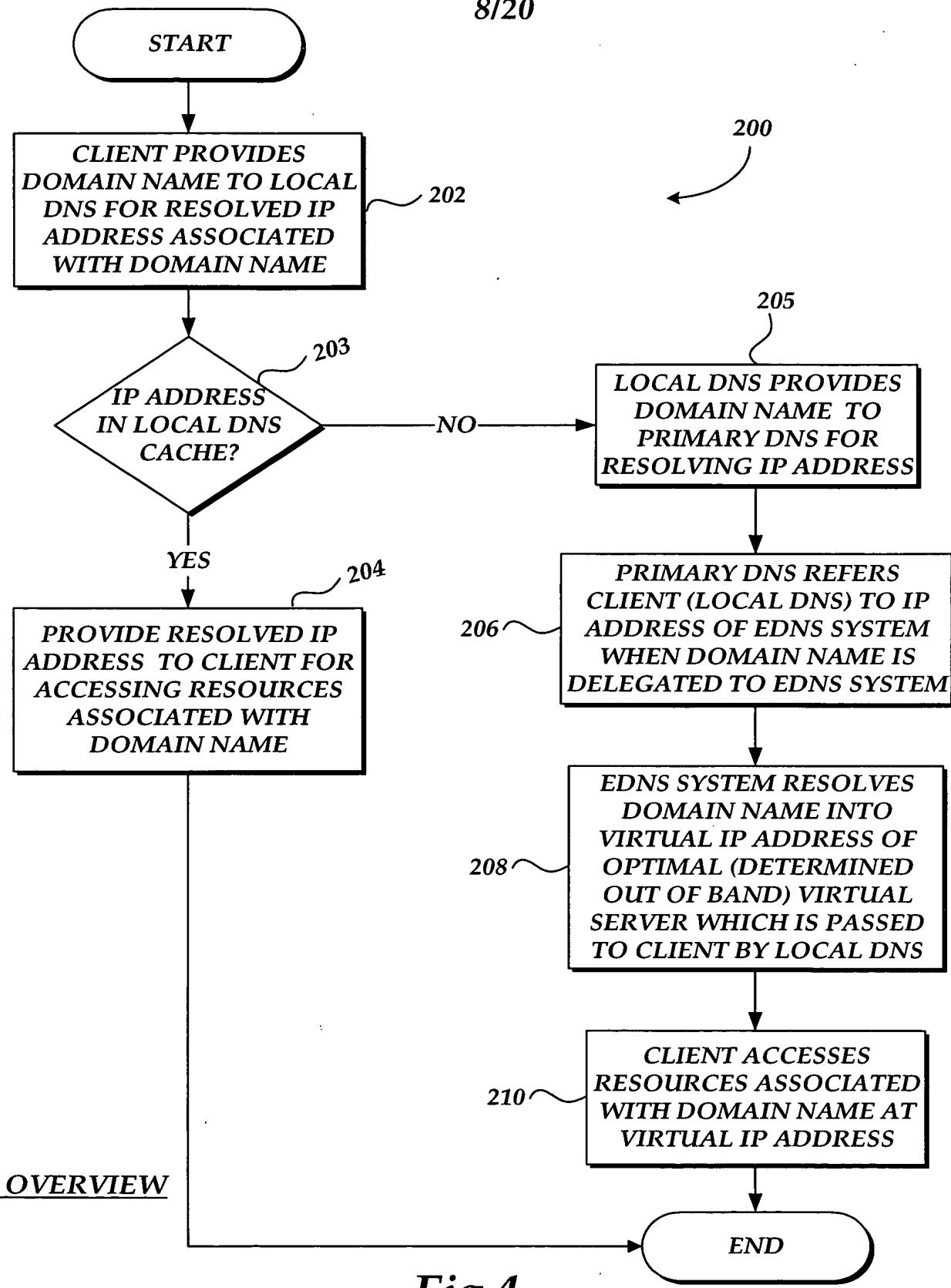
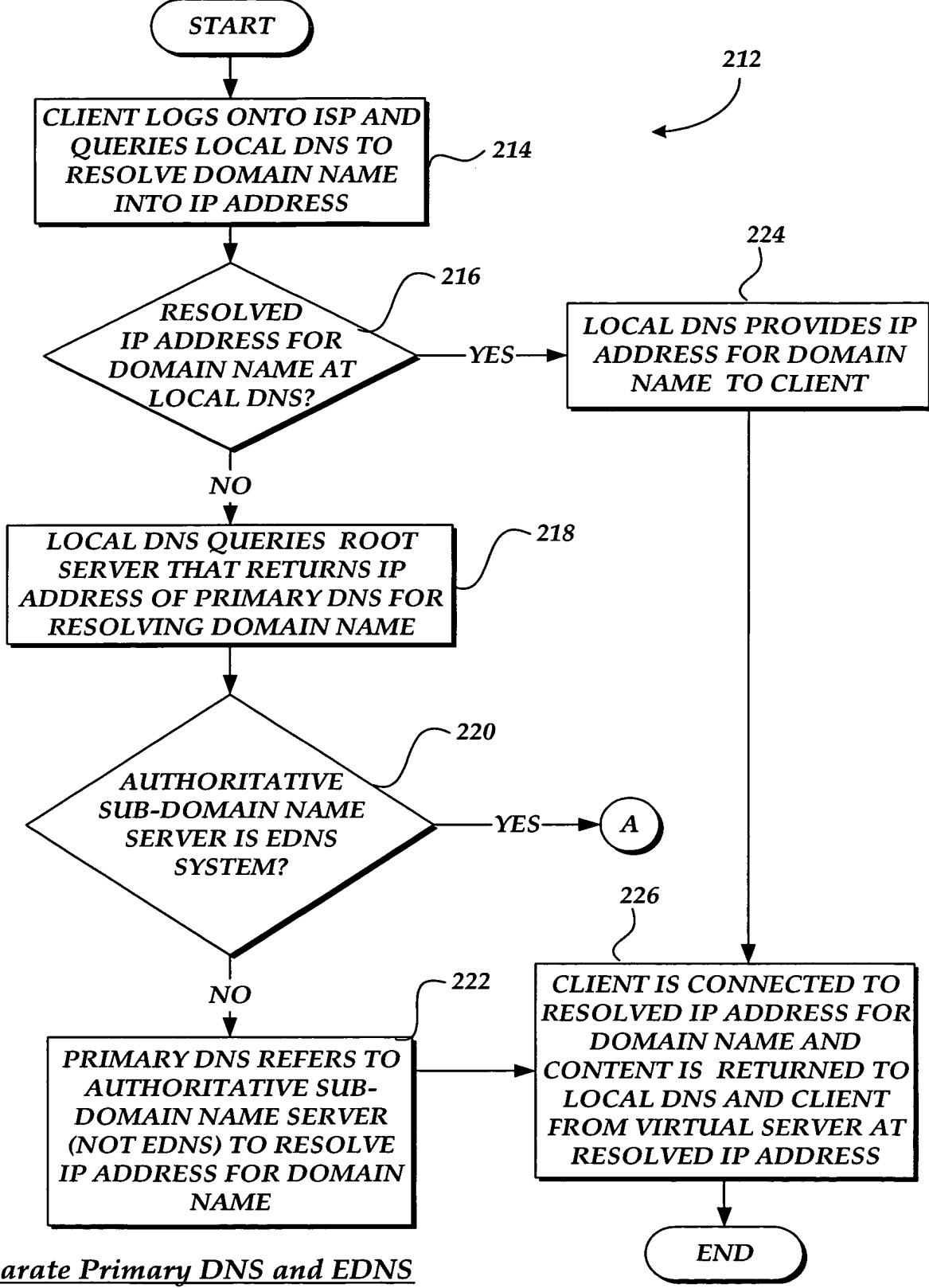
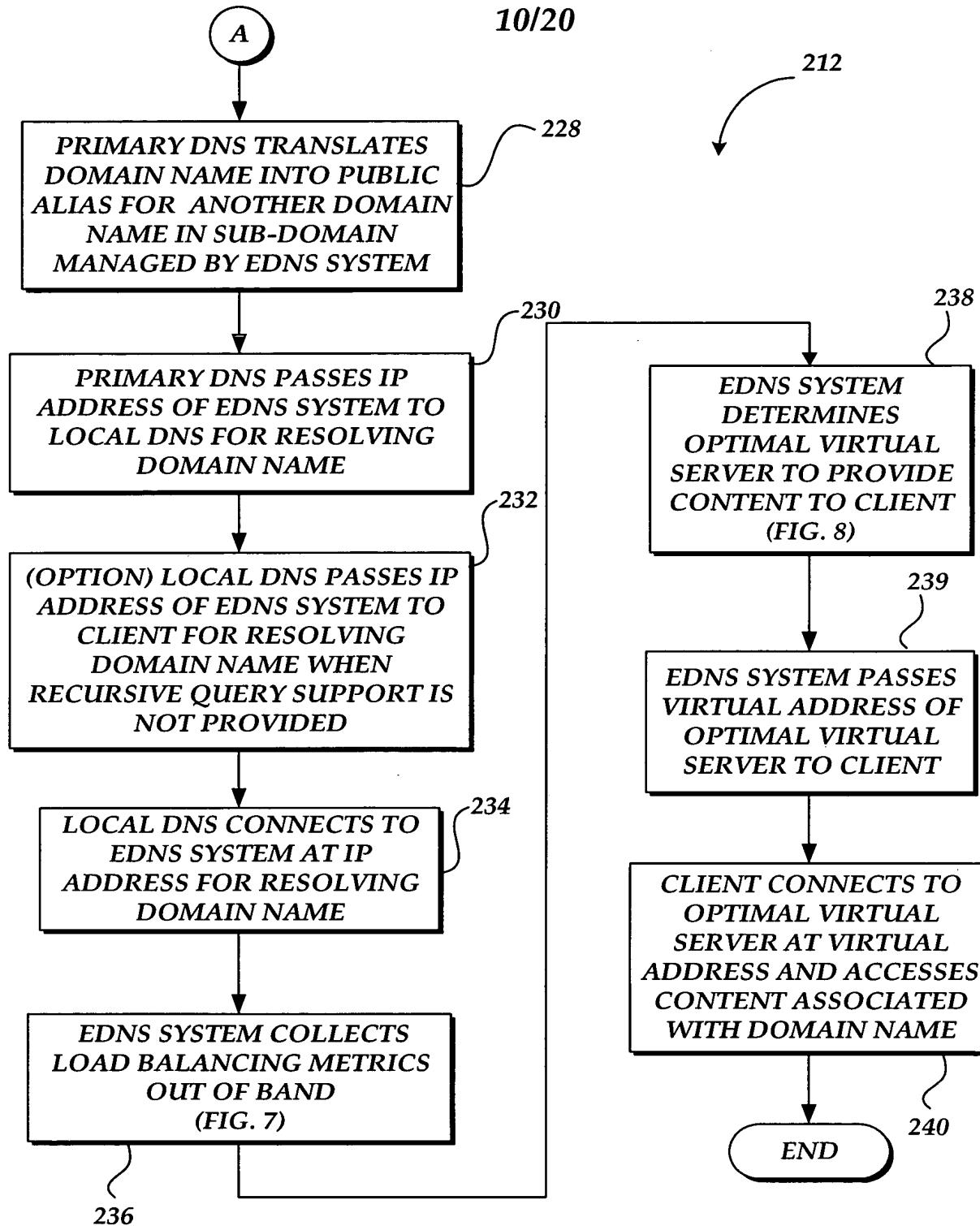


Fig.4



Separate Primary DNS and EDNS

Fig. 5A



Separate Primary DNS and EDNS

Fig. 5B

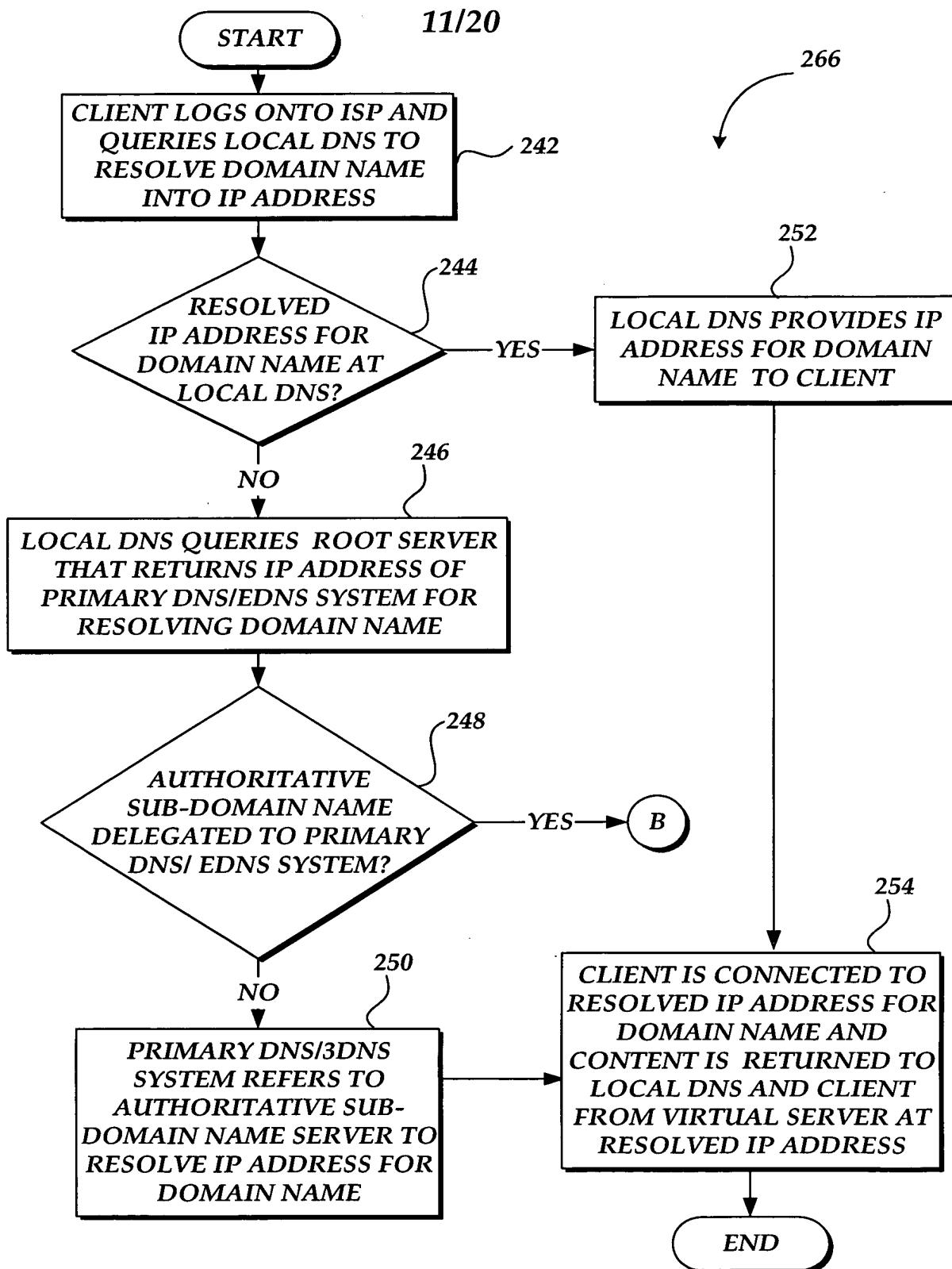


Fig.6A

Primary DNS includes 3DNS

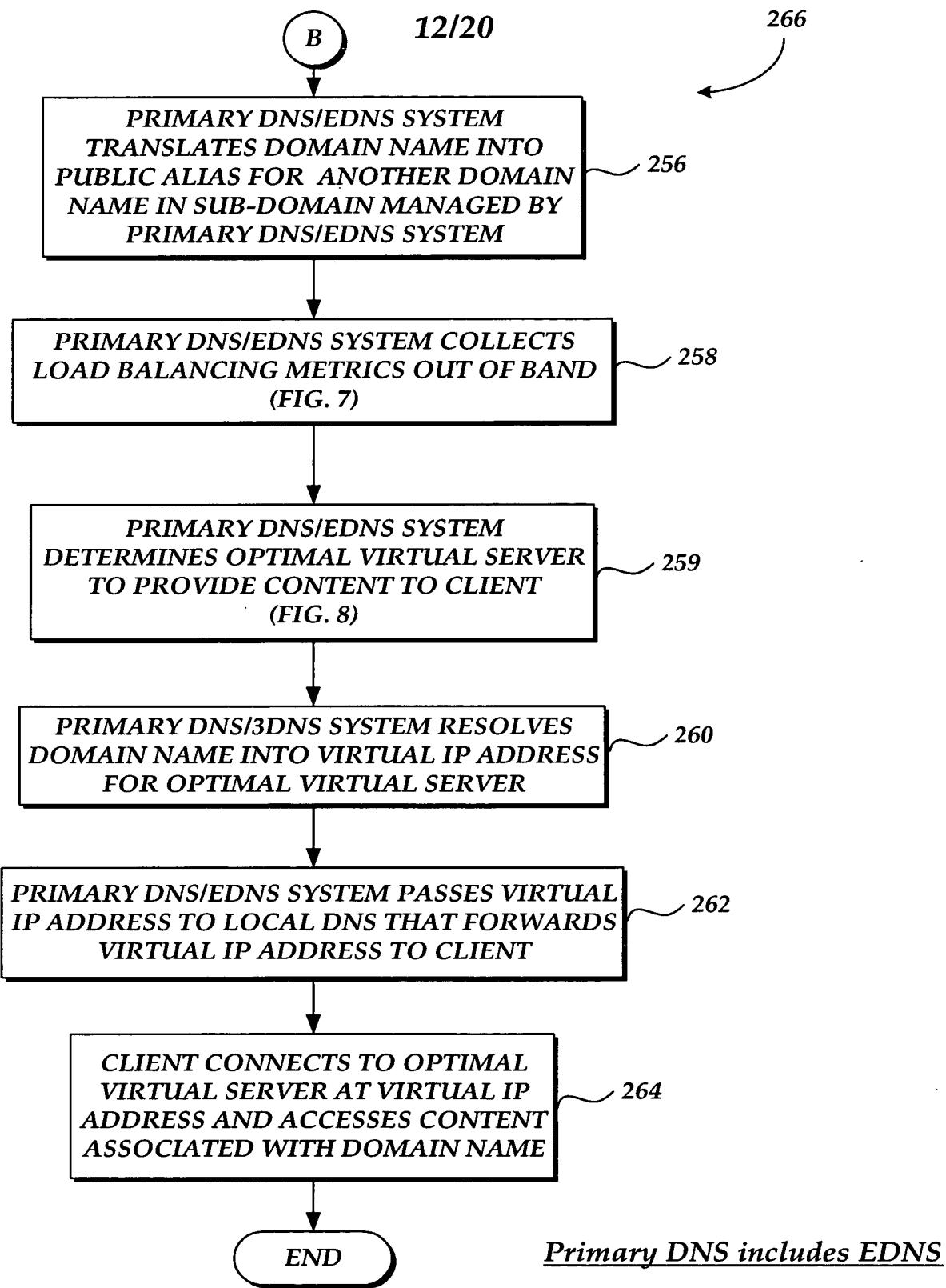


Fig. 6B

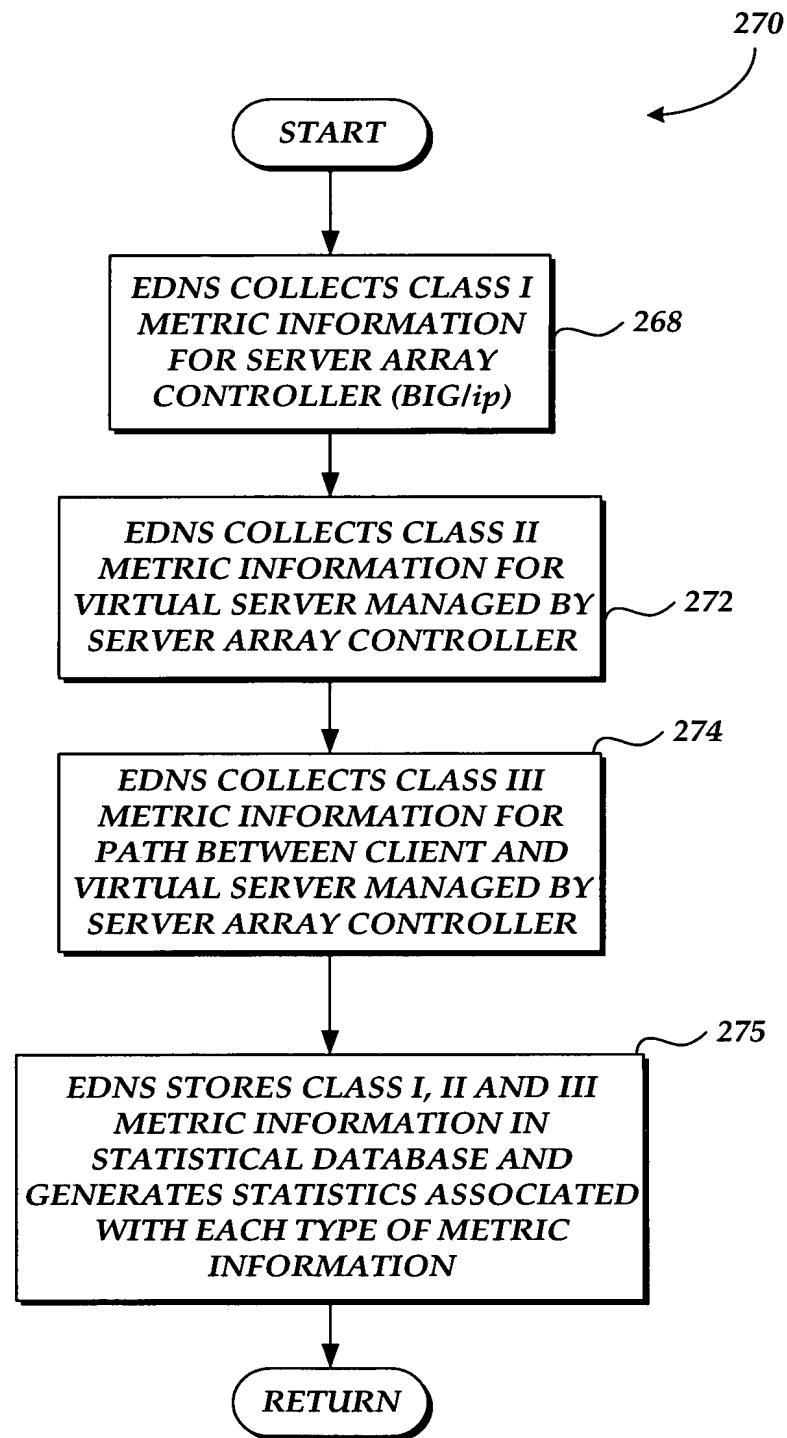


Fig. 7

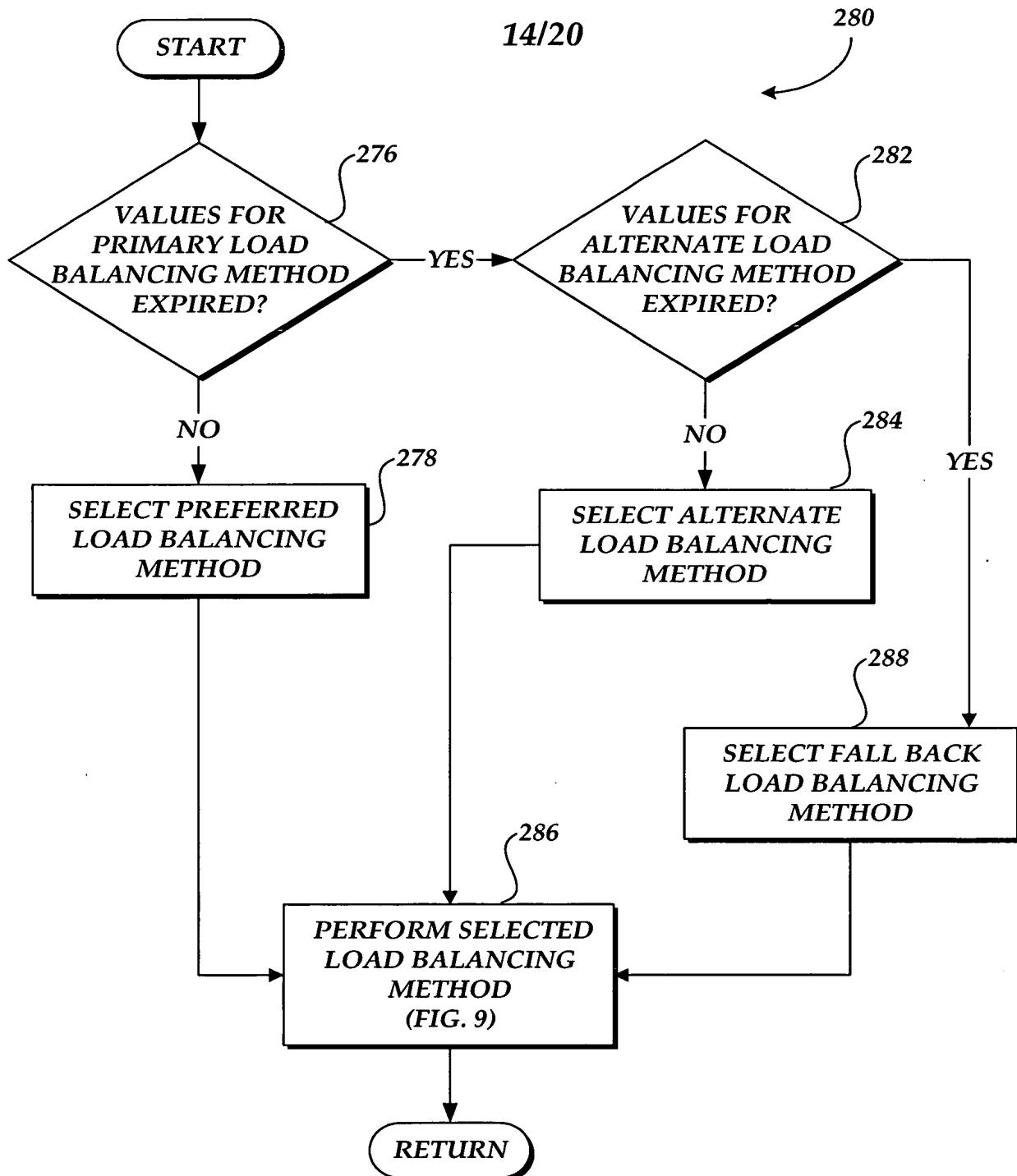


Fig. 8

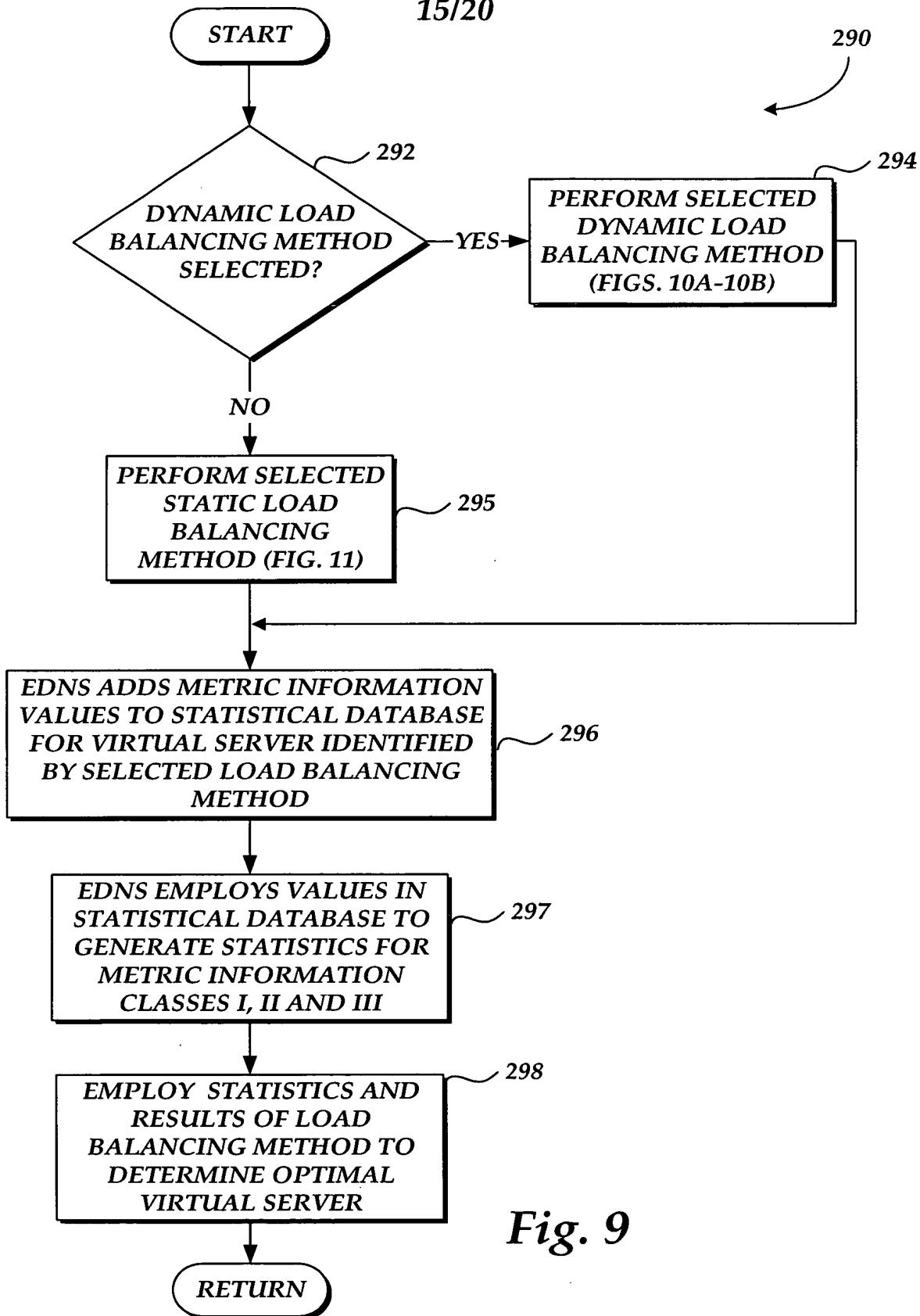


Fig. 9

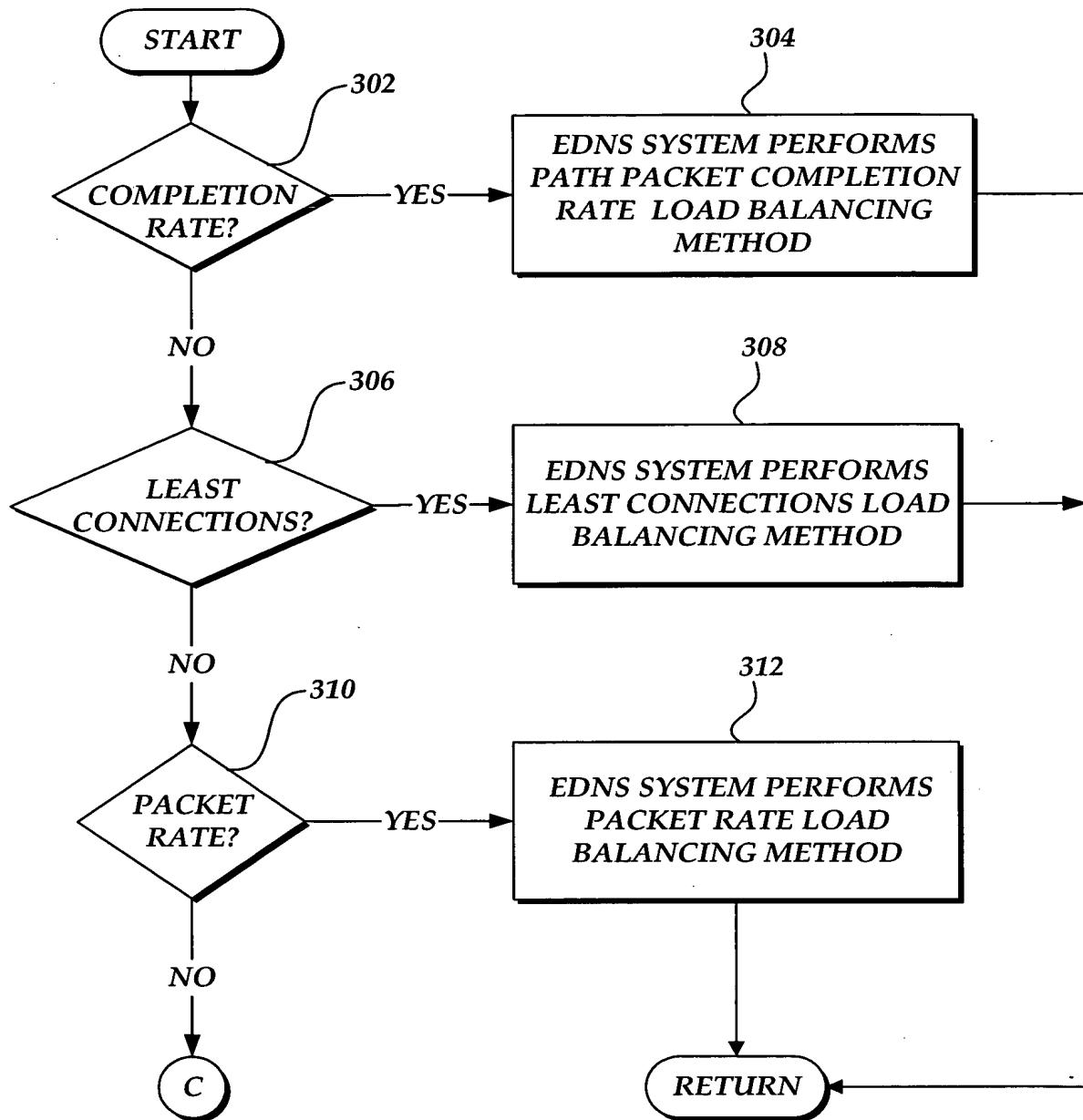


Fig. 10A

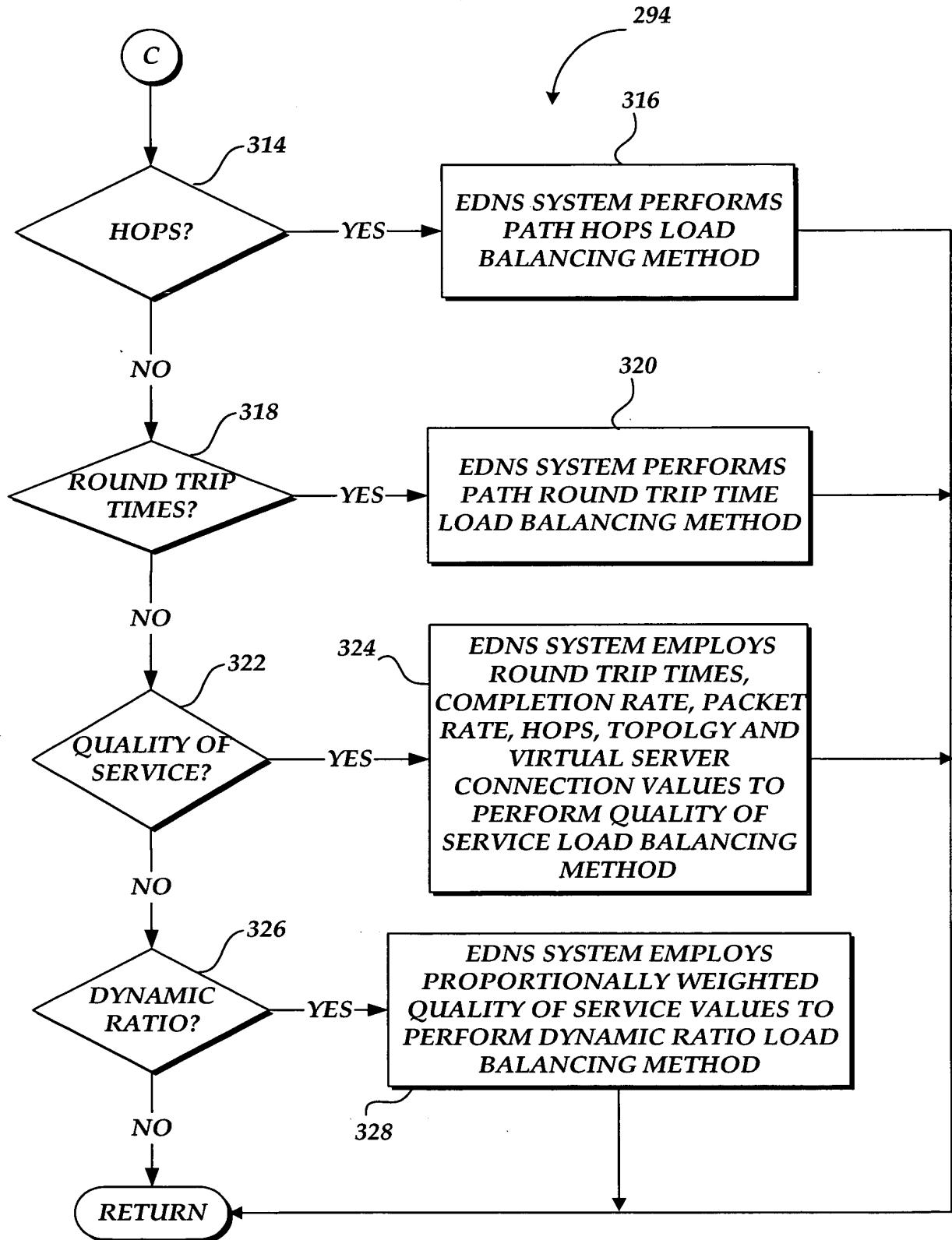


Fig. 10B

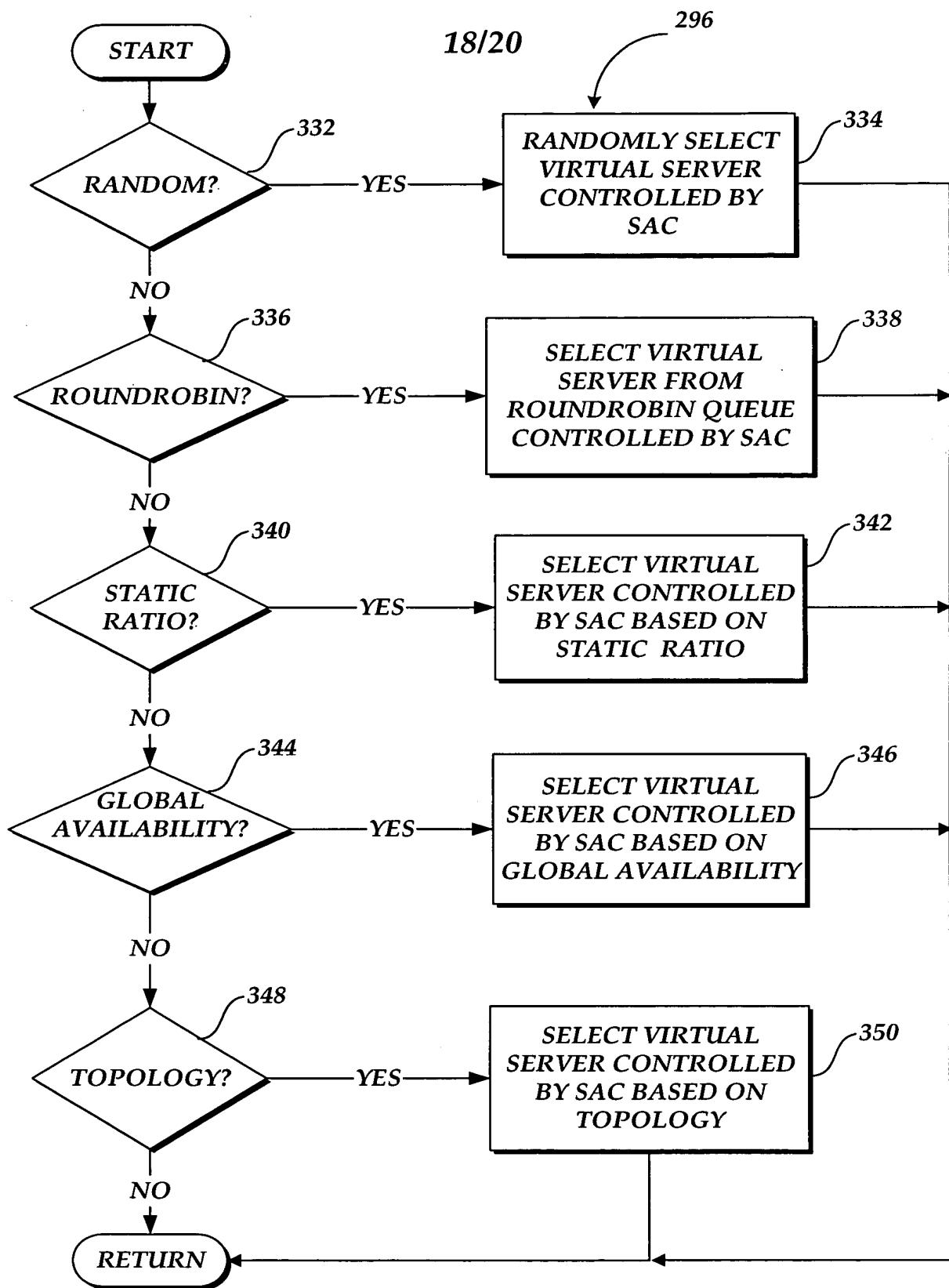
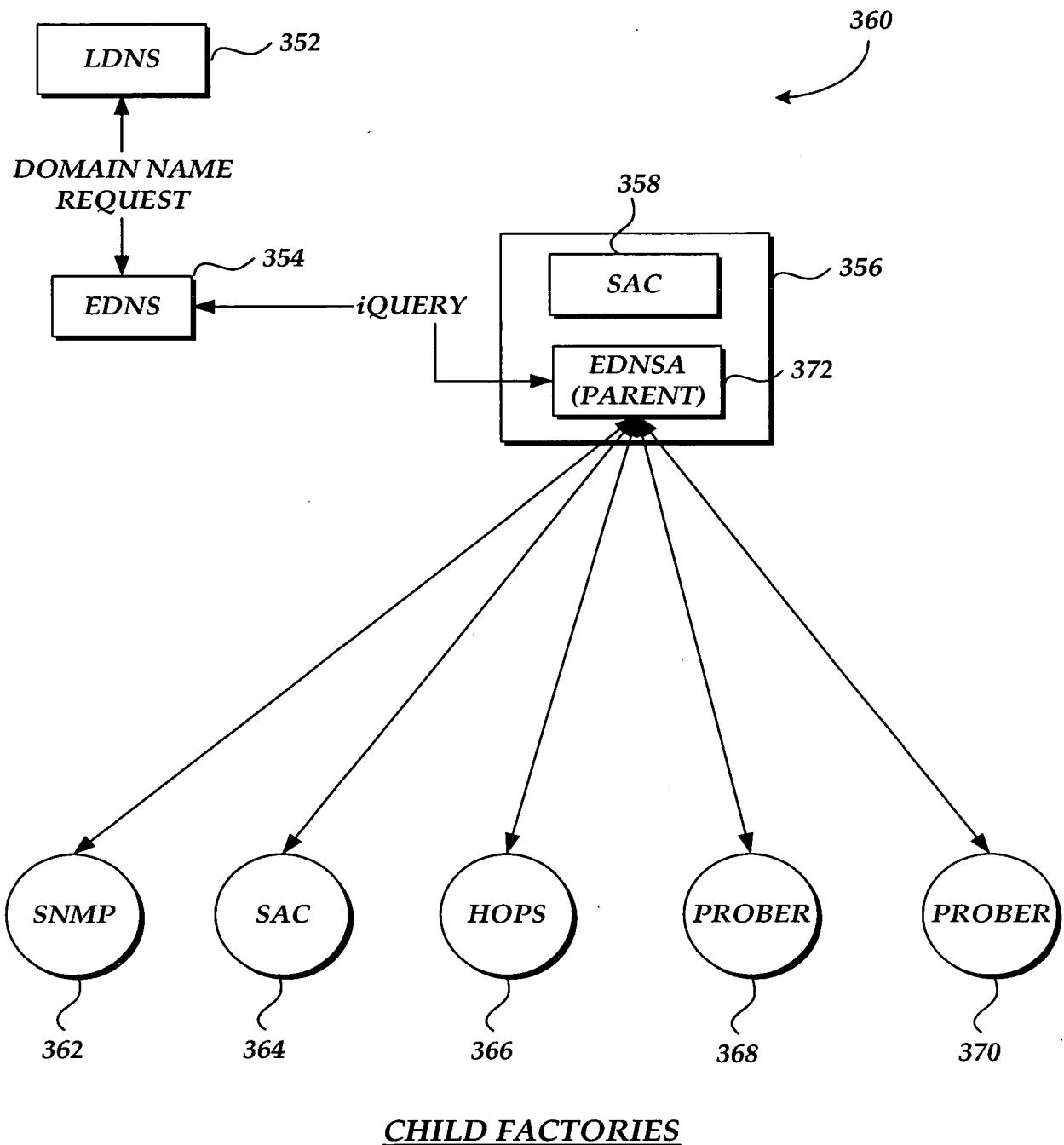


Fig. 11



CHILD FACTORIES

Fig.12

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```

TOPOLOGY {
    ACL_THRESHOLD 1
    LIMIT_PROBES YES
    LONGEST_MATCH YES
    // SERVER/MASK (BIG/IP) LDNS/MASK SOURCE
    // NORTH AMERICA DOESN'T GO TO THE SOUTH AMERICA DATA CENTER
    200.107.34.0/24 198.0.0.0/8 0
    200.107.34.0/24 199.0.0.0/8 0
    // SOUTH AMERICA DOESN'T GO TO THE NORTH AMERICA DATA CENTER
    199.5.23.0/24 200.0.0.0/8 0
    199.5.23.0/24 201.0.0.0/8 0
}

```

Fig.13

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```

TOPOLOGY SCORE {
    // SERVER/MASK (BIG/IP) LDNS/MASK SCORE
    /** NY Office ***/
    /* NY Office --> NJ (high score) */
    209.67.0.0/16 207.25.53.0/24 100
    /** Brazil ***/
    /* Brazil --> Brazil (high score) */
    200.211.0.0/16 200.255.0.0/16 100
    /* Brazil --> Argentina (low score) */
    63.65.0.0/16 200.255.0.0/16 5
    /* Brazil --> New Jersey (low score) */
    209.67.0.0/16 200.255.0.0/16 5
    /* Brazil --> New York (low score) */
    167.216.0.0/16 200.255.0.0/16 5
}

```

Fig.14